14.0 Sample Handling and Custody Requirements

Chain-of-custody procedures are followed so the possession of a sample from the time of its collection until the time of its analysis is traceable and documentable. These procedures guarantee the integrity of a sample that it was properly preserved and/or cared for until analysis, and no possibility for a sample mixup exists, tampering, or extraneous contamination. These precautions are essential if samples are collected during enforcement investigations or for future legal proceedings.

14.1 SAMPLE CUSTODY

A sample is under custody if:

A. It is in your possession,

B. It is in your view, after being in your possession, or

C. It was in your possession and then you locked it up or it was placed it in a sealed container to prevent tampering, or

D It is in a designated secure area.

14.2 FIELD CUSTODY PROCEDURES

In collecting samples for evidence, collect only the number that provide a good representation of the source being sampled. If possible, the quantity and types of samples and sample locations should be determined before the collection effort. As few persons as possible should handle samples. The field sampler is personally responsible for the care and custody of samples until they are transferred. The Project Coordinator determines whether proper custody procedures were followed during the field work and decides if additional samples are required.

14.3 TRANSFER OF CUSTODY AND SHIPMENT

Samples under Chain-of-Custody are accompanied by a Chain-of-Custody Form (Section 21.1.1.11), also called a Sampler's Log Sheet. When transferring the possession of samples, the individuals relinquishing and receiving shall sign, date, and note the time on the record. This record documents sample custody transfer from the sampler, often through another person, to the analyst at the laboratory. Samples that are shipped to a laboratory must be accompanied by a custody form (one record for each sample shipment). The original record shall accompany the shipment, and a copy shall be retained by the field investigator. Shipping containers must be padlocked or sealed. The methods of shipment, couriers' name, and other pertinent information are entered in the "Remarks" box.

14.4 ENFORCEMENT INVESTIGATIONS

Not all samples that are collected shall require that chain-of-custody procedures are followed. In many instances, there is no expectation that samples collected for ambient monitoring would ever be needed as evidence in an enforcement proceeding. Similarly, samples collected in the routine monitoring of permitted discharges or drinking water samples may be sufficient to determine compliance with permit limits or drinking water standards, but are probably insufficient to support an enforcement action, which should require a more intensive monitoring effort. Generally, a sample should be maintained under chain-of-custody if the investigator believes that the data might be needed or used in some enforcement action in the future.

In the conduct of an investigation undertaken to support an enforcement action, a number of precautions should be followed in the collection and transfer of samples, and in documenting the evidence needed to successfully conclude an enforcement action:

A. Make sure as few persons as possible handle the sample. In order to prove the "chain-of-custody," the United States attorney shall have to call every person who had possession of the sample from the time it was taken until testing was completed, and a lengthy parade of witnesses to the stand not only gives the discharger's attorney the maximum number of targets for cross-examination, but also creates a substantial preparation problem for the government's attorney.

B. Each sample must be unmistakably identified with a tag or label that includes the following information: sample identification, date and time sample was taken, and initials of the sampler. Use an indelible ink and fill-in the information at the time of sampling to avoid a possible mixup of bottles.

C. Samplers shall place the following information on the Sampler Log Sheet or in the field notebook:

1. Sample identity code

2. Signature of sampler

3. Description of sampling location detailed enough to accommodate reproducible sampling

4. Sampling equipment used

5. Date of collection

6. Time of collection

7. Type of sample (grab or composite)

8. Water temperature and other appropriate field

measurements including water level, flow rate of source, etc.

9. Sampling conditions such as weather

10. Any preservative additions or techniques

11. Record of any analyses done in the field

l2. Type of analyses to be done in laboratory

13. Comments on unusual situations occurring at or between sampling points

14. Names of observers and investigators

15. Furnish following information for composites:

a) Whether equal or proportional aliquots
b) Identity of automatic sampler, if used

16. Signatures of witnesses, if available

D. Take color photographs of each outfall or visible pollution. Write the details on back or in another permanent place. Keep a photo log to record roll number, frame identification number, description, date, etc.

E. Person recording field data shall repeat numbers so observer can verify.

F. A transfer tag should be attached to each sample container at the time of sampling.

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1. NAME_____
HOUR & DATE RECEIVED_____
DELIVERY METHOD_____
DELIVERED BY_____

3. NAME_____
HOUR AND DATE RECEIVED_____
DELIVERY METHOD_____
DELIVERED BY_____

2. NAME_____
HOUR & DATE RECEIVED_____
DELIVERY METHOD_____
DELIVERED BY_____

4. NAME_____
HOUR AND DATE RECEIVED_____
DELIVERY METHOD_____
DELIVERED BY_____

G. Package samples to prevent breakage and to minimize the probability of tampering. The person packaging shall affix a paper seal and/or lock on the container. The time of sealing

and/or locking, and the signature of the person sealing shall be noted on a permanent document.

H. The sampler and courier shall note transfer of custody (can be blanket transfer certificate). Transferrer shall note the time and place of transfer, and shall write the carrier bill of lading or requesting number. Delivering information to courier, U.S. mail, or to a common carrier shall be noted. A list of samples sent shall accompany samples (duplicate daily record may be used).

I. Samples shall be delivered to the sample storage security area. The lab custodian shall sign the receipt for sample(s) showing time, from whom received, and signature or initials, and shall note the status of seals, lock, and package. If delivery is to be made after working hours, delivery shall be made with prior arrangements to get the samples to a locked place where they shall not be tampered (courier may be given a duplicate key).

J. Samples should be logged in when received, and the laboratory custodian shall retain custody until distributed for analysis. The log shall show:

1. from whom received

2. a full list and description of all samples (variations from packing list and breakage shall be noted), condition (and number) of paper or seals, and locks

Each sample shall be assigned a number. Packing list and bill of lading shall be retained.

K. Appropriate field or preservative blanks should be submitted for analysis to show that enforcement samples were unlikely to have been contaminated by sample bottles, preservatives, or preservative ampules.

After samples have been transferred to the laboratory, laboratory chain-of-custody protocol shall continue until analyses have been completed. A sample custodian shall sign for returned containers and retain samples until advised in writing that they shall not be needed for court or hearing purposes. The custodian shall also maintain records showing location (including numbers in bound books) of permanent records of analyses and of confirmatory laboratory printouts and photographs.

All notes (field measurements, notes, and observations) taken during an investigation should be kept as a permanent record. In a legal proceeding, notes, if referred to, are subject to cross examination and are admissible as evidence.

14.5 INSPECTION/INVESTIGATION PROTOCOL

14.5.1 Pre-inspection

A. View master log and ECIS for site history.

B. Review other sources for relevant information.

1. Other DEQ divisions

2. State agencies

3. Federal agencies

C. Contact the local health department according to DEQ policy or other regulatory agencies to arrange joint inspection, as appropriate.

D. Contact probable responsible party in advance to arrange inspection "reasonable" date and time.

1. Unannounced visits may be necessary but contact must occur before entry (limited exceptions).

E. Notify the lab of probable sample submittal.

F. Obtain equipment necessary for site documentation.

1. Check and calibrate the equipment before the leaving office.

14.5.2 Inspection

A. Entry procedures:

1. Present credentials and request consent to enter, inspect, sample, and photo document.

a) If denied entry:

1) document
2) find out why
3) do not threaten
4) indicate that you may return with local law enforcement or
5) indicate you **may** seek an administrative warrant

2. If limited entry granted, treat as entry denial.

3. Situations creating extreme health or imminent hazards may allow entry even if PRP cannot be located or contacted.

a) Contact local government or law enforcement for assistance, if possible.
b) Entry interview:

1) describe **general** purpose of inspection
2) ask relevant questions
3) be professional, courteous, impartial, nonjudgmental, non-threatening
4) do not reveal complainant identity

B. Inspection documentation

1. Record observations on sequentially numbered pages in a field notebook. Responses to direct questions and observations related to the inspection purpose should be recorded.

a) Note persons present, weather conditions, and all other relevant information.
b) Photo document relevant conditions including samples collected.
c) If violations are noted:

1) Obtain evidence or proof of the violation.

2) Make sure samples taken are specific to the violation.
3) Attempt to identify the cause of the violation.
4) Attempt to assess the seriousness of the violation.
5) Document RP knowledge of the violation.
6) Note RP compliance efforts.
7) Assess possible remediation actions.

C. Sample collection (refer to DEQ Field Procedures Manual):

1. Establish sample type and parameter(s) required:

a) Record strategy in a field notebook.

2. Record environmental conditions and sample site location information.

3. Have one person pull all samples

a) Properly preserve samples immediately
b) Label bottles with unique ID number

1) Apply seals to bottles and cooler
2) Place samplers initials, date, time, and sample ID number on seals

c) Begin "chain of custody" form

1) Insure that correct sample ID is noted
2) Minimize those who have possession
3) Document proper sample handling in a field notebook
4) Obtain transit receipts, note shipping numbers in a field notebook

d) Photo document samples

D. Records inspection

1. Request to see relevant records

2. Be prepared to pay for copies, as necessary

3. Be prepared to address trade secret or confidentiality concerns

E. Exit interview

1. De minimis violations

a) Describe possible correction options, educate, encourage cooperation
b) Require certification of correction within 7 days

2. Program/permit/license/authorization violations

a) Describe probable violation of specific rule relative to inspection
b) Describe possible corrective actions as appropriate
c) Cite possible consequence of noncompliance
d) Indicate referral to specific section or program

3. Non-program violations

a) May be managed through E&LS
b) Other possible MCA violations, indicate referral to the proper agency

4. Emergencies causing acute public health risk or continuing environmental damage

a) Recommend immediate response, as appropriate
b) Contact local health authority or other agency for assistance
c) Contact immediate supervisor as soon as possible

14.5.3 Post Inspection

A. Sample processing

1. Complete chain of custody through the lab

2. Document all handling practices in a field notebook

B. Have film processed as soon as possible

1. Label and sign photos on back as described in a field notebook

C. Complete Field Investigation Report within 20 days of investigation

1. All documentation should be "court ready"

D. Create "inspection package"

1. Field investigation report

2. Photos

3. Lab results and chain of custody documents

4. Relevant past file correspondence/reports

5. Chronology of events to date, as needed (may be used later with case summary)

E. Forward completed inspection package to:

1. Proper program or E&LS for section selection assistance

2. Other agency, as appropriate

F. Follow-up

If no violation is noted then contact RP, thank them for cooperation during the inspection. Be professional, enhance public relations, and educate.